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EXAMINER

DAO, THUY CHAN

ART UNIT	PAPER NUMBER
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2192

MAIL DATE	DELIVERY MODE
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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/734,016

Applicant(s)

EL-SHIMI ET AL.

Examiner

Thuy Dao

Art Unit

2192

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10, 12-36, 41 and 42 is/are pending in the application.
- 4a) Of the above claim(s) 11, 43 and 44 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10, 12-36, 41 and 42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114.

Applicant's submission filed on April 20, 2007 has been entered.

2. Claims 1-10, 12-36, and 41-42 have been examined.

Response to Amendments

3. Per Applicants' request, claims 1, 10, and 12 have been amended, and claims 11 and 43-44 have been canceled.

4. The 35 USC §112, second paragraph rejection over claims 1-36, 41-42 and 44 is withdrawn in view of Applicants' amendments.

Response to Arguments

5. The Applicants are thanked for a thorough reply. Applicants' arguments have been considered but are moot in view of the new ground(s) of rejection.

Specification

6. The abstract of the disclosure is objected to. The first sentence "*An improved system and method for building a health model is provided*" should be deleted. Correction is required. See MPEP § 608.01(b).

Claim Objections

7. Claim 9 is objected to because of minor informalities. Claim 9 recites "*A computer storage medium ... comprising the system of claim 1.*", wherein said medium cannot comprise a computer system in claim 1.

The phrase is considered to read as - -A computer storage medium having stored thereon computer-executable instructions representing modules of claim 1.- -, as similarly recited in claim 1, lines 5-7.

Appropriate correction is required.

Claim Rejections – 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 1-10, 12-36, and 41-42 are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent No. 6,505,342 to Hartmann et al. (art made of record, hereinafter "Hartmann").

Claim 1:

Hartmann discloses *a computer system for building a health model of software components, comprising:*

one or more processors; system memory; and one or more physical computer-readable media having stored thereon computer-executable instructions representing modules configured to build a health model of software components (e.g., col.4: 15-29; col.30: 1-36), the modules including:

an instrumentation collector wherein the instrumentation collector collects instrumentation of software components (e.g., col.6: 63 – col.7: 30; col.7: 61 – col.8: 23; col.8: 52 – col.9: 26);

an instrumentation analyzer for analyzing instrumentation of software components, wherein the instrumentation analyzer maps instrumentation to states of operation (e.g., FIG. 6, col.11: 32-60), and

wherein the instrumentation analyzer groups instrumentation which results in the same transition of one state of operation to another state of operation (e.g., col.12: 4-21); and

a health model generator wherein the health model generator creates a health model using the states of operation and the groups of mapped instrumentation (e.g., FIG. 6, decision table 600 as a health model, col.11: 61 – col.12: 58).

Claim 2:

The rejection of claim 1 is incorporated. Hartmann also discloses *a database for storing the information about the instrumentation of the software components (e.g., col.8; 42 – col.9: 46).*

Claim 3:

The rejection of claim 1 is incorporated. Hartmann also discloses *a database for storing the health model (e.g., col.30: 1-53).*

Claim 4:

The rejection of claim 1 is incorporated. Hartmann also discloses *the health model comprises a state diagram with a transition from one state to another state for a group of instrumentation (e.g., FIG. 3, col.5: 32 – col.6: 17).*

Claim 5:

The rejection of claim 1 is incorporated. Hartmann also discloses *the instrumentation collector comprises a spreadsheet for manual entry of information about instrumentation of software components (e.g., col.13: 28-67).*

Claim 6:

The rejection of claim 1 is incorporated. Hartmann also discloses *the instrumentation collector comprises a parser for automatically parsing a software component to extract information about instrumentation of the software component* (e.g., col.30: 27-36).

Claim 7:

The rejection of claim 1 is incorporated. Hartmann also discloses *the instrumentation analyzer comprises an application that groups the instrumentation events by filtering the instrumentation based upon the state of the software component before the occurrence of instrumentation and the state of the software component after the occurrence of instrumentation* (e.g., col.12: 4-21).

Claim 8:

The rejection of claim 1 is incorporated. Hartmann also discloses *the health model generator comprises an application that generates a state diagram* (e.g., col.5: 32 – col.6: 17).

Claim 9:

Claim 9 is a computer storage medium version, which recites the same limitations as those of claim 1, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim, it also teaches all of the limitations of claim 9.

Claim 10:

Hartmann discloses *a method for building a health model of a software component, comprising the steps of:*

creating an inventory of instrumentation of the software component (e.g., col.8: 42 – col.9: 46; col.7: 61 – col.8: 23);

mapping the inventory of instrumentation to states of operation of the software component (e.g., col.6: 63 – col.7: 30; col.8: 52 – col.9: 26);

analyzing the inventory to identify instrumentation that result in the same transition from one state of operation of the software component to another state of operation of the software component (e.g., FIG. 6, col.11: 32-60);

grouping the identified instrumentation that result in the same transition from one state of operation of the software component to another state of operation of the software component (e.g., col.12: 4-21); and

generating the health model using the states of operation and at least one transition representing a group of instrumentation from one state of operation of the software component to another state of operation of the software component (e.g., col.11: 61 – col.12: 58).

Claim 12:

The rejection of claim 10 is incorporated. Hartmann also discloses *the step of creating an inventory of instrumentation of the software component comprises parsing the software component to extract information about instrumentation of the software component (e.g., col.30; 27-36).*

Claim 13:

The rejection of claim 10 is incorporated. Hartmann also discloses *the step of determining states of operation of the software component (e.g., col.11: 32-60).*

Claim 14:

The rejection of claim 13 is incorporated. Hartmann also discloses *the step of determining states of operation of the software component comprises determining a stopped state (e.g., col.12: 4-21).*

Claim 15:

The rejection of claim 13 is incorporated. Hartmann also discloses *the step of determining states of operation of the software component comprises determining a running state (e.g., col.5: 32 – col.6: 17).*

Claim 16:

The rejection of claim 13 is incorporated. Hartmann also discloses *the step of determining states of operation of the software component comprises determining a failed state* (e.g., col.12: 4-9).

Claim 17:

The rejection of claim 10 is incorporated. Hartmann also discloses *the step of adding instrumentation where there is none to indicate an occurrence of a transition from a failed state of operation to a running state of operation* (e.g., FIG. 11, col.19: 8-54).

Claim 18:

The rejection of claim 10 is incorporated. Hartmann also discloses *the step of adding instrumentation where there is none to indicate an occurrence of a transition from a running state of operation to a failed state of operation* (e.g., col.21: 48 – col.22: 64).

Claim 19:

The rejection of claim 10 is incorporated. Hartmann also discloses *the step of persistently storing the inventory of instrumentation* (e.g., col.8: 42 – col.9: 46).

Claim 20:

The rejection of claim 10 is incorporated. Hartmann also discloses *the step of persistently storing the generated health model* (e.g., col.30: 1-53).

Claim 21:

The rejection of claim 10 is incorporated. Hartmann also discloses *revising the instrumentation of the software component* (e.g., col.7: 61 – col.8: 23).

Claim 22:

The rejection of claim 21 is incorporated. Hartmann also discloses *updating the health model using the revised instrumentation* (e.g., col.8: 52 – col.9: 26).

Claim 23:

The rejection of claim 22 is incorporated. Hartmann also discloses *generating a new health model* (e.g., col.11: 61 – col.12: 58).

Claim 24:

The rejection of claim 10 is incorporated. Hartmann also discloses *the step of receiving an inventory of instrumentation comprises receiving an inventory of one or more events* (e.g., col.5: 32 – col.6: 17).

Claim 25:

The rejection of claim 10 is incorporated. Hartmann also discloses *the step of receiving an inventory of instrumentation comprises receiving an inventory of one or more performance counters* (e.g., col.12: 4-21).

Claim 26:

The rejection of claim 10 is incorporated. Hartmann also discloses *the step of receiving an inventory of instrumentation comprises receiving an inventory of one or more error messages* (e.g., col.19: 8-54).

Claim 27:

The rejection of claim 10 is incorporated. Hartmann also discloses *the step of receiving an inventory of instrumentation comprises parsing the software component to extract information about instrumentation of the software component* (e.g., col.30: 27-36).

Claim 28:

The rejection of claim 10 is incorporated. Hartmann also discloses *the step of receiving an inventory of instrumentation comprises manually entering instrumentation information in a spreadsheet application* (e.g., col.13: 28-67).

Claim 29:

The rejection of claim 10 is incorporated. Hartmann also discloses *the step of analyzing the inventory comprises determining the state of operation before an instrumentation event occurs and the state of operation after the instrumentation event occurs* (e.g., col.12: 4-21).

Claim 30:

The rejection of claim 10 is incorporated. Hartmann also discloses *the step of analyzing the inventory to group instrumentation comprises filtering the instrumentation based upon the state of the software component before the occurrence of instrumentation and the state of the software component after the occurrence of instrumentation* (e.g., col.11: 32-60).

Claim 31:

The rejection of claim 10 is incorporated. Hartmann also discloses *the step of analyzing the inventory to group instrumentation that result in the same transition from one state of operation of the software component to another state of operation of the software component comprises labeling each group of instrumentation as a single transition action from one state of operation of the software component to another state of operation of the software component* (e.g., col.11: 61 – col.12: 58).

Claim 32:

The rejection of claim 10 is incorporated. Hartmann also discloses *the step of analyzing the inventory to group instrumentation that result in the same transition from one state of operation of the software component to another state of operation of the software component comprises using an application to analyze the inventory to group*

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instrumentation that result in the same transition from one state of operation of the software component to another state of operation of the software component (e.g., col.6: 63 – col.7: 30).

Claim 33:

The rejection of claim 10 is incorporated. Hartmann also discloses *the step of analyzing the inventory comprises determining a component to blame for instrumentation indicating a failure of the software component (e.g., col.19: 8-54).*

Claim 34:

The rejection of claim 26 is incorporated. Hartmann also discloses *the step of generating the health model comprises generating a state diagram (e.g., col.5: 32 – col.6: 17).*

Claim 35:

The rejection of claim 1 is incorporated. Hartmann also discloses *the step of generating a state diagram comprises using an application to generate the state diagram (e.g., col.12: 4-21).*

Claim 36:

Claim 36 is a computer storage medium version, which recites the same limitations as those of claim 10, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim, it also teaches all of the limitations of claim 36.

Claim 41:

The rejection of claim 10 is incorporated. Hartmann also discloses *the health model is configured to detect cycles of change in states of operation (e.g., col.5: 32 – col.6: 17).*

Claim 42:

The rejection of claim 41 is incorporated. Hartmann also discloses *at least one of the cycles of change in states of operation comprises a cycle of failure and recovery* (e.g., col.12: 4-9).

10. Claims 1, 9-10, and 36 are rejected under 35 U.S.C. 102(e) as being anticipated by Desai (art of record, US Patent No. 6,968,291).

Claim 1:

Desai discloses *a computer system for building a health model of software components, comprising:*

one or more processors; system memory; and one or more physical computer-readable media having stored thereon computer-executable instructions representing modules configured to build a health model of software components (e.g., FIG. 2 and 3, col.3: 45 – col.4: 31), the modules including:

an instrumentation collector wherein the instrumentation collector collects instrumentation of software components (e.g., FIG. 5, col.5: 1-34; FIG. 11, col.8: 42 – col.9: 41);

an instrumentation analyzer for analyzing instrumentation of software components, wherein the instrumentation analyzer maps instrumentation to states of operation (e.g., FIG. 9, col.7: 48 – col.8: 25), and

wherein the instrumentation analyzer groups instrumentation which results in the same transition of one state of operation to another state of operation (e.g., FIG. 11, col.8: 42 – col.9: 41); and

a health model generator wherein the health model generator creates a health model using the states of operation and the groups of mapped instrumentation (e.g., col.5: 1-34; col.8: 42 – col.9: 41).

Claim 9:

Claim 9 is a computer storage medium version, which recites the same limitations as those of claim 1, wherein all claimed limitations have been addressed

and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim, it also teaches all of the limitations of claim 9.

Claim 10:

Hartmann discloses *a method for building a health model of a software component, comprising the steps of:*

creating an inventory of instrumentation of the software component (e.g., FIG. 13, col.10: 21-62; col.3: 45 – col.4: 31);

mapping the inventory of instrumentation to states of operation of the software component (e.g., FIG. 5, col.5: 1-34; col.8: 42 – col.9: 41);

analyzing the inventory to identify instrumentation that result in the same transition from one state of operation of the software component to another state of operation of the software component (e.g., FIG. 9, col.7: 48 – col.8: 25);

grouping the identified instrumentation that result in the same transition from one state of operation of the software component to another state of operation of the software component (e.g., FIG. 11, col.8: 42 – col.9: 41); and

generating the health model using the states of operation and at least one transition representing a group of instrumentation from one state of operation of the software component to another state of operation of the software component (e.g., col.5: 1-34; col.8: 42 – col.9: 41).

Claim 36:

Claim 36 is a computer storage medium version, which recites the same limitations as those of claim 10, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim, it also teaches all of the limitations of claim 36.

Conclusion

11. Any inquiry concerning this communication should be directed to examiner Thuy Dao (Twee), whose telephone is (571) 272 8570. The examiner can normally be

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reached on the first Monday of the bi-week, and every Tuesday, Thursday, and Friday from 6:00AM to 6:00PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam, can be reached at (571) 272 3695.

The fax phone number for the organization where this application or proceeding is assigned is (571) 273 8300.

Any inquiry of a general nature of relating to the status of this application or proceeding should be directed to the TC 2100 Group receptionist whose telephone number is (571) 272 2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

T. Dao



TUAN DAM
SUPERVISORY PATENT EXAMINER